

REMARKS/ARGUMENTS

Claims 1-36 are pending in the application. Claim 1, 13, and 25 have been amended. Reconsideration is respectfully requested. Applicant submits that the pending claims 1-36 are patentable over the art of record and allowance is respectfully requested of claims 1-36.

Paragraph 33 of the Specification is objected to as missing an application number. Applicants are amending the Specification to provide the application number and to overcome the objection.

Claims 1-36 are rejected under 35 U.S.C. 101. Applicants respectfully traverse, but, in order to expedite prosecution, Applicants have amended the claims.

In particular, claims 1-36 are rejected as being directed to non-statutory subject matter because they do not produce a tangible result. Applicants have amended claims 1, 13, and 25 to indicate that the representative is associated with a path that indicates a location of a document in a data store (e.g., Specification, page 3, paragraph 10; page 4, paragraph 15; page 5, paragraph 18; page 7, paragraph 25).

Claims 13-24 are rejected as being directed to non-statutory subject matter. Applicants have amended claim 21 to an article of manufacture comprising one of hardware logic and a computer readable medium including a program for handling redirects in documents, wherein the hardware logic or program causes operations to be performed. For example, the Specification, on page 19, paragraph 65 states:

The term "article of manufacture" as used herein refers to code or logic implemented in hardware logic (e.g., an integrated circuit chip, Programmable Gate Array (PGA), Application Specific Integrated Circuit (ASIC), etc.) or a computer readable medium, such as magnetic storage medium (e.g., hard disk drives, floppy disks,, tape, etc.), optical storage (CD-ROMs, optical disks, etc.), volatile and non-volatile memory devices (e.g., EEPROMs, ROMs, PROMs, RAMs, DRAMs, SRAMs, firmware, programmable logic, etc.). Code in the computer readable medium is accessed and executed by a processor.

Claims 1-36 are rejected under 35 U.S.C. 102(a) as being anticipated by Lim et al. "Dynamic Maintenance of Web Indexes Using Landmarks". Applicants respectfully traverse.

The Lim reference is directed to studying the problem of keeping inverted indexes up-to-date (Introduction). On the other hand, claims 1, 13, and 25 are directed to handling redirects in documents. For example, paragraph 5 on page 1 of the Specification describes:

Some Web pages do not contain content, but, instead, contain a "redirect" to another Web page. For example, if a given Web page A (i.e., a source) redirects to another Web page B (i.e., a target), the Web browser shows Web page B whenever a request for Web page A is received.

Additionally, claims 1, 13, and 25 describe forming at least one equivalence class that includes documents that are connected through a redirect. For example, paragraph 21 on page 6 of the Specification describes:

Initially, each document is in its own equivalence class. Then, for each entry in the redirect file, if a first document redirects to a second document, the equivalence classes of the first and second documents are unified. Continuing with this processing, if the second document redirects to a third document, then the third document is in the same equivalence class as the first and second documents. The redirect component 136, thus, processes the entries in the redirect file to identify redirect chains in the form of equivalence classes.

The Lim reference in section 1 describes inverted indexes. There is no description of redirects or of forming at least one equivalence class that includes documents that are connected through a redirect.

Moreover, claims 1, 13, and 25 also describe detecting cycles for each equivalence class, wherein documents in a cycle are marked so that they are not indexed. For example, paragraph 22 on page 6 of the Specification describes:

For example, a cycle occurs when a first document redirects to a second document, which redirects to a third document, which redirects back to the first document. Once the redirect chains are identified, the redirect component 136 performs cycle detection. In particular, cycle detection analyzes each redirect chain, looking for cycles. If a cycle is detected in a redirect chain, the redirect component 136 marks the documents involved in that redirect chain with a "do not index" indicator (e.g., flag), which indicates to the

indexing component 142 that these documents are invalid documents that should not be indexed.

The Lim reference in Section 2.1, Forward Index Update, describes a forward index that stores the words that occur in a document and the positions of each occurrence. There is no description of detecting cycles for each equivalence class, wherein documents in a cycle are marked so that they are not indexed.

Also, claims 1, 13, and 26 describe detecting incomplete chains for each equivalence class, wherein documents in an incomplete chain are marked so that they are not indexed. For example, paragraph 23 on pages 6-7 of the Specification describes:

An example of an incomplete chain occurs when the documents in a single redirect chain are redirects, $R1 \rightarrow R2 \rightarrow \dots \rightarrow Rn$, where Rn is a redirect to a document that was not discovered, fetched, and stored by the crawler component 132 (i.e., "crawled"). This redirect chain is considered incomplete because there is no content associated with Rn (because it was not "crawled"). The redirect component 136 marks documents in the incomplete redirect chain with a "do not index" indicator.

The Lim reference in section 4, Experimental Evaluation, describes measuring the number of inverted index update operations generated by the landmark-diff method and compare it with that of the forward index method. There is no description of detecting incomplete chains for each equivalence class, wherein documents in an incomplete chain are marked so that they are not indexed.

Furthermore, claims 1, 13, and 26 describe selecting a representative for each equivalence class whose documents are to be indexed, wherein the representative is associated with a path that indicates a location of a document in a data store. For example, paragraph 25 on page 7 of the Specification describes:

In certain implementations, the redirect component 136 selects a representative for each redirect chain (e.g., equivalence class) whose documents have not been marked with a "do not index" indicator. In certain implementations, the representative is a path (e.g., a URL) with which the content of the final target document in the chain is indexed.

The Lim application in section 4, Landmark Policy and Block Size, describes fixed size partitioning. There is no description of selecting a representative for each equivalence class

whose documents are to be indexed, wherein the representative is associated with a path that indicates a location of a document in a data store.

Also, the subject matter of claims 1, 13, and 25 occurs before an index is created (e.g., Specification, pages 4-9, paragraphs 15-32; FIGs. 2A and 2B), while the Lim reference is directed to studying updates to the index. Therefore, Applicants respectfully submit that the Lim reference does not anticipate claims 1, 13, and 25.

Dependent claims 2-12, 14-24, and 26-36 incorporate the language of independent claims 1, 13, and 25 and add additional novel elements. Therefore, dependent claims 2-12, 14-24, and 26-36 are not anticipated by the Lim reference for at least the same reasons as were discussed with respect to claims 1, 13, and 25.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-36 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

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